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EXAMINER

CHOW, CHARLES CHIANG

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| ART UNIT | PAPER NUMBER |
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2684

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/291,387

Applicant(s)

GU ET AL.

Examiner

Charles Chow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**Office Action for
Applicant's Amendment
(July/30/2002)**

1. Regarding applicant's amendment for claims 1, 15, based on the no disclosure for the designating the reverse common channel to the reverse dedicated channel for transmitting consecutive frames for the long data segments, Needham discloses the communication unit could send continuous data segment messages 200 to the base station, which is in the reverse direction from the communication unit to the base station (col. 3, lines 45-61). Patent to Rikkinen has included in this office action, for disclosing the above claimed features, for transmitting consecutive frames, superframe, from mobile station to base station, on the reverse channel allocated by the base station in the reservation table.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. (US 5,517,507) in view of Rikkinen et al. (US 6,031,827).

Needham et al. discloses **claim 1**, a method of transmitting use data (user data message 201, 205, front figure, abstract) on a reverse common channel with a reverse dedicated channel release (the data message can be either the reverse or forward dedicated channel,

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such as the data messages 200 sent from base station to communication units 103 to 109, or may be sourced by a communication unit, col. 3, lines 46-48). Needham assumes the transmitting device can be the communication unit, and the receiving device could be the base station for the reverse dedicated channel (col. 3, lines 62-65) to provide the acceptable quality service using the notification via the energy-burst response (203 to 207) for the retransmission (title, front figure, abstract, Fig. 1 to Fig. 5-4).

Needham discloses the dividing user data into a plurality of segmented messages for user longer data into N frames, such as, (a) the frames 501 to 509 in col. 6, lines 40-48; (b) the data messages transmitted in multiple contiguous frames in col. 7, lines 49; (c) the transmitting a second data message in a second time window in col. 8, lines 52-55.

Needham discloses the transmitting of the segmented messages of consecutive frames on the (multiple continuously Nth frames, in above) on the reverse common channel (from communication unit to base station).

Needham discloses the determining whether a base station receives each of the segmented messages from (a) the notification of acknowledgement ACK to determining the whether received of each frame, and NACK for the response for retransmission, col. 1, lines 23-30; (b) the energy-burst response for the negative acknowledgement NACK to request for retransmission, col. 5, lines 51-64; (c) the indication of the energy burst for unacceptable quality, col. 8, line 25-29.

In the above, Needham is not emphasizing the designated reverse common channel to the reverse dedicated channel for the transmitting of the consecutive data frames, inherently if not obvious, Rikkinen teaches the base station allocating of reversed channel slots, in the reservation table for assigning frames for the mobile station's data transmission capacity request for transmitting of the consecutive frames, superframe, on the reserved reverse channel (abstract, figure in the cover page; col. 3, line 61 to col. 4, line 10; col. 19, lines 15-30), such that the transmission of the larger data capacity could be reliably reserved via base station's arrangement, to avoid the transmission collision in the consecutive frames.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and include Rikknen's base station's superfram allocation for the reverse channel slots for mobile station's request for the large data capacity transmission, to Needham's system, such that the system could reliably arrange the superframe to large data transmission on consecutive frames with transmission collision.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Needham in view of Rikkinen, and further in view of Honkasalo et al. (US 5,995,496).

In the above it does not include the power controlled channel.

Honkasalo teaches, **claim 2**, the power controlled channel for packet data transfer (title, claim 5, col. 12, line 56-63, the base station transmits the feedback-acknowledgement to adjust/control the transmission power of the terminal, to response the quality of the received

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data). It is obviously a good feature to include in the system with the channel power control for transferring of quality data. By doing so, the data transferring error would be improved, due to the compensation of the signal fading in the transmission (col. 3, line 1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Honkasalo's closed loop acknowledgement for controlling the channel power, to Needham, such that the quality of the data transmission could be improved.

4. Claims 3-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. in view of Honkasalo, and further in view of Ayabe et al. (US 6,108,530).

Needham has shown above the multiple continuous frames in different time window for transmitting of the divided-long-data frames. However, it is not clearly enough for the sequence number, and indicating presence or absence of segments.

Ayabe et al. teaches, **claim 3**, a system for transmitting the divided-fragmented displayable message in between the base station (110-1, 110-3) and short-message entity (104, 105; col. 4, lines 34-47, col. 4, lines 48-60, uplink and downlink) as shown in front figure/abstract.

The fragmented-data packages are separately transmitted including a sequence number (reference-parameter indicating corresponding-position of the fragment abstract) to indicate the presence/absence in the succeeding frame (following fragment). The including of the referencing position information in the fragmented messages is such an apparent, essential, accurate, efficient, method of transmitting long-divided fragmented data to avoid the puzzle during re-assembling of the received data-fragments. Therefore, it would have been obvious

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to one of ordinary skill in the art at the time of invention to modify and add Ayabe's referencing parameter to indicate the corresponding position of the fragments, to Needham above, such that message could be efficiently transferred.

Regarding **claim 4**, Needham has discloses the receiving of the response from base station indicating reception of each segmented message (col. 8, line 25-30, the receiving of acknowledgement for indicating reception of each frame, and providing the negatively-acknowledgement-energy burst, when received frames are in errors).

Regarding **claim 5**, Needham has disclosed the response message indicating reception of a particular segment (the energy bust response; col. 7, lines 65-67, the retransmitting only the particular messages which are not adequately received); Needham shows the sequence number above (referencing parameter for corresponding-position of the fragments).

the NACK (col. 5, line 51-64). the retransmit only the particular message not adequately received (col. 7, lines 65-76).

Regarding **claims 6, 7**, refer to examiner's comment in claim 5 above, which also provides the claimed features for this clam for the failed reception (NACK-energy-burst for request for retransmit).

Regarding **claim 8**, Needham has shown above the retransmitting of the particular frames not adequately received.

Regarding **claim 9**, Needham has shown above the whether a response indicating reception of retransmission (col. 5, lines 51-64, the as long as the negatively responded, again, for the retransmission).

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Regarding **claim 10**, Needham has shown above the predetermined time period (predetermined time window, in abstract, col. 5, line 32, col. 5, line 60, for the energy-burst responses 203, 206, 207, for the retransmission; the burst-energy response in time-window for each frame, col. 5, lines 29-36).

Regarding **claim 11**, Needham has shown above the response for last Nth frame, and burst-energy response in time-window for each frame (above in claim 10), and including the last frame having the burst-energy immediately after the last frame (col. 6, line 39-45).

Regarding **claim 12**, Needham has shown above the predetermined response time period, the response indicating reception of the last segment.

Regarding **claim 13**, Needham has shown above the retransmitting of the last frame (the last Nth frame); the response for the last segment; the not received (the energy-burst NACK retransmission); the predetermined time period (proper predetermined time window).

Regarding **claim 14**, Needham has shown above the base station transmitting a succeeding segment message base on the received response (energy-burst for each frame) indicating the reception of the last segment.

5. Claims 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. in view of Honkasalo, and further in view of Ayabe et al.

In the above it does not include the checking a count of the more flag field, although in the above it has shown the flag field (the referencing position parameter for the fragments in the user data field for the indicating of more frames in the incoming message).

Ayabe teaches **claim 15**, the CRC in for the guarantee of the short message delivery, col. 5, lien 35-37). Ayabe teaches the checking a count of the more flag field (the referencing parameter indicating the total size the message, abstract; the reference position in above, the indicates of the identity in col. 2, line 49) for the more flag field. Besides, Ayabe also teaches the assembling, reconstructing, of the received fragments (col. 2, lines 51-67); the marks for ready for reassembly (col. 7, lines 28-29; the inserting any fragments received out of order (col. 9, lines 20-22). The referencing-position, the CRC, and the total size-count, are all obviously, essentially, apparently, a good technique for the transmitting/assembling of the fragmented data. By following the steps from Ayabe/Needham, the system could easily, efficiently transmits the long fragmented data to avoid the reassembly problem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Ayabe's total size-count, to Needham above, such that the missing fragment could be efficiently located.

Regarding the amended portion for the receiving a message via consecutive frames on a designated revers common channel, referring to examiner's comment in claim 1 above.

Regarding **claim 16**, refer to examiner's comment in claim 2 above, which also provides the claimed features for this clam for the power controlled channel.

Regarding **claim 17**, refer to examiner's comment in claim 4 above, which also provides the claimed features for this clam for the response from either base station or mobile station for sending response to indicate the reception.

Regarding **claim 18**, refer to examiner's comment in claims 3, 4 above, which also

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provides the claimed features for this claim for the response indicating reception; the sequence referencing position parameter.

Regarding **claim 19**, refer to examiner's comment in claim 8 above, which also provides the claimed features for this claim for the predetermined time period (window) for not receiving (not adequately received, energy-burst NACK-retransmission request).

Regarding **claim 20**, refer to examiner's comment in claim 9 above, which also provides the claimed features for this claim for the mobile station response indicating retransmission (energy-burst, NACK-retransmission).

Regarding **claim 21**, refer to examiner's comment in claim 11 above, which also provides the claimed features for this claim for the response for receiving last message (Needham's col. 6, line 43-45, above).

Regarding **claim 22**, refer to examiner's comment in claims 1, 5 above, which also provides the claimed features for this claim for the error (unacceptable quality) and the request for retransmission.

Regarding **claim 23**, Ayabe has considered the completed continuously checking as shown above based upon the referencing position parameter, and the total size count parameters.

Ayabe also teaches the assembling, reconstructing, of the received fragments (col. 2, lines 51-67); the marks for ready for reassembly (col. 7, lines 28-29); the inserting any fragments received out of order (col. 9, lines 20-22).

***Response to Arguments
And
Conclusion***

6. Applicant's arguments with respect to claims 1-23 have been considered but are moot in

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view of the new ground(s) of rejection.

Regarding applicant's amendment for claims 1, 15, based on the no disclosure for the designating the reverse common channel to the reverse dedicated channel for transmitting consecutive frames for the long data segments, Needham discloses the communication unit could send continuous data segment messages 200 to the base station, which is in the reverse direction from the communication unit to the base station (col. 3, lines 45-61).

atent to Rikkinen has included in this office action, for disclosing the above claimed features, or transmitting consecutive frames, superframe, from mobile station to base station, on the reverse channel allocated by the base station in the reservation table. In view of the disclosures from the cited prior arts, applicant's arguments are moot and claims 1-23 are remaining in the rejection manner.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of

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this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703)-308-6732.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow

October 4, 2002.


THOMAS CONNOR LE
PATENT EXAMINER
